FROM THE TRENCHES

In this edition, combat arms and combat support Marines share the same goal – winning battles. They train in Virginia to tailor explosions for specific jobs. They fly needed gear and people throughout the Al Anbar Province, Iraq. They and their four-legged companions sniff out explosives and weapons caches in Al Qaim, Iraq. In Fallujah, Iraq, sailors assigned with Marines save lives on the battlefronts. Marines in Afghanistan provide the precious commodity of water in a desert environment. In gunships, light armored reconnaissance vehicles and tanks, they are putting in the hours and doing the dangerous work necessary to make Iraq a safer place. These are just a sampling of the many stories of Marines *From the Trenches* – combat arms and combat support – working as a team.

Special Operations Training Group Blows the Hatches

COMBAT ARMS

By Cpl. Ryan Walker
CAMP HANSEN, Okinawa, Japan

Marines with 3rd Reconnaissance Battalion, 3rd Marine Division, and Explosive Ordnance Disposal, 9th Engineer Support Battalion, 3rd Force Service Support Group honed their breaching skills during a 10-day Dynamic Entry Basic Course.

Taught by III Marine Expeditionary Force Special Operations Training Group, the course trained the Marines to create and precisely position explosive devices to breach, then reach objectives.

Advanced breaching skills give Marines the capability to enter secure buildings and recover precious cargo or information.

"We teach them how to go through plate glass all the way up to reinforced concrete walls," said Gunnery Sgt. John R. Gouley Jr., senior dynamic entry instructor, SOTG.

> ***Big things in small packages.***
> **Cpl. Jake M. Brannan prepares plastic explosive. The lightweight device is capable of blasting through a concrete wall as Marines will discover during training at Camp Hansen June 2. Brannan is with 3rd Recon Bn, 3rd MarDiv.**

Photo by Cpl. Ryan Walker

The Marines built small devices capable of blasting through reinforced concrete walls, using plastic explosives, blasting caps, detonation cord, cardboard, electrical tape and adhesive glue.

The small charges are designed for easy transport and contain the exact amount of explosive material to accomplish a specific mission.

"Fighting in close quarters, we don't want a large, uncontrolled detonation with a lot of fragmentation, because it could harm the operating force," Gouley said. "We want the maximum amount of penetration with the least amount of collateral damage."

As in a real situation, the Marines calculated the exact amount of explosives necessary to gain entry into their objective.

In a single line known as a stack formation, the Marines approached and attached an explosive charge to their proposed entry point. Only a few meters away, they shielded themselves behind a Kevlar blanket from the blast.

The charge blew a man-sized hole in the concrete training structure sending debris flying and smoke into the air.

"Being so close to the charge was a new experience," said Sgt. Edward J. Weis, an explosive ordnance disposal technician. "Usually we're at the maximum safe distance, but this blows everything out of the water because we're at the minimum safe distance."

"Standing next to the charge and feeling the pressurized gases from the explosion was a rush," said Cpl. Jake M. Brannan, with 3rd Recon Bn.

Using these recently learned skills, the Marines demonstrated their ability to enter high-risk situations and maintain low collateral damage.

"With speed and surprise these Marines can go in, take something or someone of high value, and come out safely," Gouley said. M

> ***Door-building the Marine Corps way.***
> **A Kevlar blanket shields Marines in stack formation from an explosive charge blast during the Dynamic Entry Basic Course taught by the III MEF Special Operations Training Group at Camp Hansen June 2. The blast blew a man-sized hole into a wall.**

Photo by Cpl. Ryan Walker

"We want the maximum amount of penetration with the least amount of collateral damage."

Corps' Workhorses Saddle Up

No Job's Too Large or Small for HMH-361's Super Stallions

COMBAT SUPPORT COMBAT SUPPORT

By Sgt. Jose L. Garcia
AL QAIM, Iraq

Piece of cake. A Super Stallion from HMH-361, piloted by Capt. Matthew M. Keeney and 1st Lt. Kalle G. Kangas, easily lifts an external load weighing 13,000 pounds over the Iraqi desert to Marines at Al Taqaddum Nov. 11. Using a dual-point cargo hook system, the CH-53E can carry loads up to 32,000 pounds.

Photo by Cpl. Paul Leicht

No matter the load, the CH-53E Super Stallions of Marine Heavy Helicopter Squadron 361 don't buck their duties when it comes to transportation of people and assets.

"External lifts are our bread and butter out here," said Capt. E.C. Palmer, a pilot with HMH-361.His squadron has flown more than 1,900 hours and carried more than 2.6 million pounds of cargo throughout the Al Anbar Province during Operation Iraqi Freedom II.

"Our primary mission is to transport supplies and heavy equipment, and our secondary mission is to carry personnel. We are out here to support everyone," said the Endwell, N.Y., native.

The workhorses performing these missions are the largest helicopters in the U.S. military inventory, and have been since 1981, said 23-year veteran Master Gunnery Sgt. Alfredo Hernandez, a crew chief with aviation logistics department, Marine Wing Headquarters Squadron 3.

Designed for land and sea-based operations, the CH-53E is the only helicopter capable of lifting some of the new weapon systems in the Marine Corps, like the M-198 howitzer and the light armored vehicle.

"We typically carry external loads between 13,000 and 26,000 pounds," said Capt. Brie Walker, a pilot with HMH-361, and a native of Brunswick, Maine.

"With the optional dual-point cargo hook system, we can carry external loads faster, but we still have to pay close attention to things, such as our airspeed, to lift the load safely and get it to where it needs to go.

The CH-53E is also equipped with a standard single-point system enabling the helicopter to lift smaller loads.

The single-point system is made up of an 'A' frame attached to the helicopter, a pendant and an attached hook which drops through the 'hellhole' located in the center of the fuselage.

"Compared to the single-point, the dual-point system allows us to lift heavier loads and different types of loads," said Sgt. Bilhan Saavedra, a crew chief with HMH-361.

Crewmembers 'call the load' through the hellhole to the helicopter support team on the ground. The HST hooks the load to the CH-53 hovering less than 20 feet above the cargo.

Crewmembers also monitor external loads throughout the flight. A crewmember's input helps the pilot fly the helicopter in the right position to lift the load, said Walker.

The constant stream of information allows the pilot to be fully aware of the situation in the air and on the ground, explained Walker.

Compared to other CH-53 models, the 'E' variant's advantages include more payloads and in-flight refueling capabilities that allow for indefinite range.

Another safety measure is the airborne battle-buddy system. Regardless of the load or the mission they always fly in two-helicopter sections.

"Day or night, during every flight we watch each other's back," said pilot Capt. Matthew M. Keeney, a native of Haddonfield, N.J. M

Birds-eye view. Looking through the 'hellhole' on a CH-53 Super Stallion, Sgt. Bilhan Saavedra, crew chief and a native of West New York, N.J., maintains eye contact with the external load during flight to help the pilot fly the helicopter safely.

Photo by Cpl. Paul Leicht

CH-53 Sea Stallion

Improvements from the CH-53D include the addition of a third engine which allows the CH-53E to lift the majority of the Fleet Marine Force's equipment, a dual point cargo hook system, improved main rotor blades, and composite tail rotor blades. The dual digital automatic flight control system and engine anti-ice system give the aircraft an all-weather capability. In normal configuration it seats 37 passengers and can carry 55 passengers with centerline seats installed. The dual point hook systems provides the stability needed to carry external loads at increased airspeeds.

Specs

Length: 99 feet 5 inches
Height: 28 feet 4 inch
Rotor diameter: 79 feet
Speed: 172.5 mph
Maximum takeoff weight:
With internal load: 69,750 pounds
With external load attached: 73,500 pounds
Range:
Without refueling: 621 miles
With aerial refueling: indefinite
Armament:
Two XM-218 .50-caliber machine guns.
Crew: 3
Introduction date: June 1981
Unit Replacement Cost: $26,100,000
Inventory: 160

Information pulled from the Marine Corps Fact File at www.marines.mil/factfile.nsf/AVE?openview@count=3000

"We are out here to support everyone."

LAR Bn. Patrols Iraq's Borders, Limits Terrorists' Travels

By Sgt. Jose L. Garcia
AL QAIM, Iraq

Marines patrol the endless miles of empty road and dunes along the Iraqi-Syrian border day and night searching for terrorists.

Most of those attempting to illegally enter Iraq are smugglers, a tradition of sorts for Iraqis. Smuggling has been around for thousands of years in this region and the latest crop of border crossers – foreign terrorists – has the Marines of 1st Light Armored Reconnaissance Battalion out on the prowl.

"We have to keep Syrians out or (stop) Iraqis (from) going into Syria to buy weapons," said Staff Sgt. Vince Peralta, 30, Weapons Company platoon sergeant from Los Angeles. "We have to stop them from using those weapons against coalition forces."

Foreign fighters entering the country aren't the only concern, Peralta said. Another problem is the local Iraqis who attempt to cross into Syria with stolen items to sell or trade for weapons. Surprisingly, sheep are one of the hottest commodities.

"Just a week ago we caught a sheep herder trying to cross the border into Syria with stolen sheep," Peralta said. "We have to stop bad people from stealing from Iraqis and making money that way."

The patrols, covering hundreds of miles each day, take a toll on the Marines and their light armored vehicles.

LAV crews patrol an average of nearly 6,000 miles a month in an area spanning 372,600 miles, according to Chief Warrant Officer 2 Richard Ortega, the battalion's maintenance officer from Emmett, Idaho.

Most of the patrols are through extremely rough terrain, Ortega said.

< *Highlanders hit the desert.* **Lance Cpl. Neal Walker scans the horizon and provides additional security from a light armored vehicle. Walker, 21, of Orlando, Fla., is a rifleman with the combat replacement company. The Marines of 1st LAR Bn., nicknamed the Highlanders, are here to conduct security patrols and establish a military presence along the border.** *Photo by Cpl. Randy L. Bernard*

It's a job they couldn't do without the relatively light, fast and armed LAVs. The Marines credit their success to the vehicles' mobility covering the miles up and down the border.

"With the mobility and strategic planning that we have, we can spot anyone coming across the border fast," Peralta said.

Patrolling the powdered desert landscape of the border isn't easy, Peralta said. Marines have taken a few hits from landmines and improvised explosive devices.

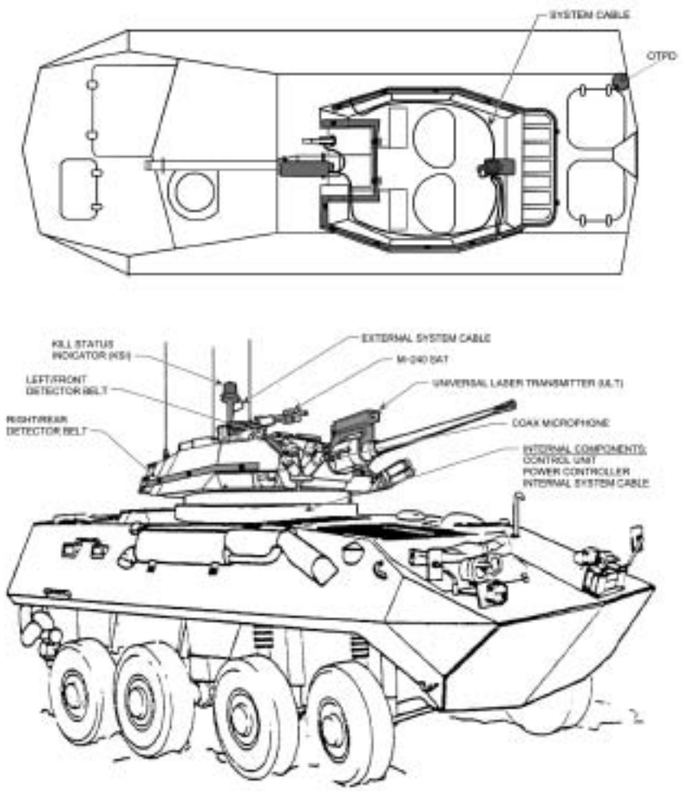
"We try not to kick out too much dirt so they don't know that we are here," Peralta said.

The schedule is nearly as brutal as the terrain for Marines, Peralta said. It's a non-stop mission. At the beginning of the deployment, crews would be out for a month and then would head back to headquarters for rest. The presence is still constant, but now they have changed to three-day rotations.

"It's a good rotation," Peralta said, "I get to see my Marines relax, make phone calls, send e-mails and find out what's going on in the rear, but most importantly, do maintenance on our vehicles and clean weapons. We have to take care of our vehicles."

Despite the hot weather and rough terrain in the Iraqi border desert, Marines still relish being Marines.

"I enjoy being out here," said Cpl. Erik J. Orezechowski, 25, a mortarman from Philadelphia. "It's what (Marines do) – live in the field. I ask to come out here even when I'm not supposed to. It's an adventure day in and day out." M



v *Dismount.* **21-year-old Pfc. Daniel F. Stark leaves the safety of his light armored vehicle near the Syrian border in Iraq. The Webberville, Mich., native is an LAV mechanic with 1st LAR Bn.** *Photo by Cpl. Randy L. Bernard*

Light Armored Vehicle 25

The LAV-25 provides strategic mobility to reach and engage the threat, tactical mobility for effective use of fire power, fire power to defeat soft and armored targets, and battlefield survivability to carry out combat missions. It is a night capable, all-terrain, all-weather vehicle. The LAV-25 is air transportable via C-130, C-141, C-5 and CH-53E and fully amphibious with a maximum of 3 minutes preparation.

Specs

Length: 251.6 inches
Height: 106.0 inches, (101.0 with pintle mount removed)
Width: 98.4 inches (turret facing forward)
Weight: 24,100 pounds
Combat Weight: 28,200 pounds
Range: 410 miles
Speed: 62 mph
Swim speed: 6 mph
Minimum turn diameter: 51 feet
Maximum trench crossing: 81 feet
Maximum grade: 60 percent
Maximum side slope: 30 percent
Crew: Driver, gunner, commander and 6 troops
Engine: 275 horsepower Detroit Diesel 6V53T
Transmission: Allison MT653 (5 speeds forward – 1 reverse)
Differentials: 4 automotive, 2 water drive
Suspension: 8-wheel independent.
Unit Replacement Cost: $900,000
Inventory: 401

Armament

Primary: M-242 25 mm chain gun
Secondary: M-240 7.62 mm machine gun mounted coaxially to main gun
Supplementary: M-240 7.62 mm machine gun (pintle mounted)
Ancillary: Smoke grenades, 2 clusters of 4 tubes each

Ammunition (when combat loaded)

Ready:
210 rounds of 25 mm
400 rounds of 7.62 mm
8 smoke grenades

Stowed:
420 rounds of 25 mm
1,200 rounds of 7.62 mm
8 smoke grenades

Information pulled from Marine Corps Fact File at www.marines.mil/factfile.nsf/AVE?openview@count=3000 and FAS Military Network at www.fas.org.

"We have to stop them from using those weapons against coalition forces."

K9s' Sensitive Snouts Save Lives, Rout Terrorists

By Lance Cpl. Miguel A. Carrasco Jr.
FALLUJAH, Iraq

> ***The 'dogged' pursuit of terrorists.*** **Sgt. Robert C. Barham, a military police dog handler with 3rd Bn., 5th Marines, and his dog conduct detailed searches for weapons caches in Fallujah, Iraq, Nov. 14. Barham and the dog are in the city in support of Operation Phantom Fury.**
Photo by Lance Cpl. Miguel A. Carrasco Jr.

Even steel doors can't defeat the noses of 3rd Battalion, 5th Marine Regiment's K-9 unit.

Dynamite, detonating cord, C-4, smokeless powder, water gel, time fuses, sodium chloride – you name it, their noses can detect it, way before a human's can. In fact, a dog's nose is up to 10,000 times more sensitive than a human's.

It's this extra keen sense of smell that makes the K-9s of 3/5 such invaluable tools in the war on terror.

The dogs can often reach places Marines can't. They listen to handler's commands and sit down when they smell explosives or weapons. This makes searches quicker, easier and safer for Marines, often preventing deadly explosions.

"The insurgents try to hide the weapons, but the dogs are trained to find them no matter where they are," said Sgt. Robert C. Barham, 25, a military working dog handler with 3/5.

During one search of a building in Fallujah, for example, the dogs picked up the scent of a 20mm round and an assault rifle through the steel walls of two different safes.

Being a dog doesn't mean they're expendable, said Cpl. Bruce L. St. John, 20, a military working dog handler with 3/5. Like any other Marine, someone's always covering their backs. The dogs and handlers move in to sniff out weapon caches and explosive ordnance only after Marines have cleared buildings of insurgent activity.

Recently the dogs helped secure a bridge over the Euphrates River. Located in the heart of the city, it was on this bridge that two U.S. civilian workers were hung March 31. It became symbolic in the fight against insurgents and its reopening was a significant moment for the Marines.

When there isn't anything for the dogs to find, the handlers try not to let the dogs go empty handed. "Sometimes to keep them on their toes we purposely let them find ammunition. It makes the dogs feel good," said Barham.

The reward for these dogs – who help save the lives of the Marines with whom they serve – comes not in pay or recognition. They need simpler rewards, St John said.

"When they make the handlers happy they get to play with a rubber ball," he said. M

A Marine 3rd Bn., 5th Marines, walks along a bridge in Fallujah during its reopening Nov. 14. This is the first time the bridge has been opened since the bodies of two U.S. civilian contractors were hung from its rafters. The civilians along with two other contractors were captured by Iraqi insurgents, mutilated and dragged through the city March 31. *Photo by Lance Cpl. Miguel A. Carrasco Jr.*

No Nose Knows Like a Dog's Nose

By Gunnery Sgt. Glenn Holloway
HEADQUARTERS MARINE CORPS, Washington

Smell is one of the most provocative senses man possesses. It evokes childhood memories of baking cookies and stale school bus rides; it turns back clocks to high school football games and the perfumed necks of first loves. It is a powerful sense that most of us take for granted because we rely mainly on sight and sound. Still, the average human recognizes about 10,000 smells, according to the Howard Hughes Medical Institute Web site.

Enter the humble dog.

Ol' Rex doesn't thrust his nose into every unsuspecting crotch just for fun. Dogs are dependent on their noses like humans are to sight and sound. The sensory cells behind a dog's nose are thousands of times larger and more sensitive than a human's, according to the Discovery Channel Web site. Humans have about 10 million odor receptors in our brains. Put it in physical terms, those receptors would be about the size of a postage stamp. That area in a dog would be about the size of a handkerchief.

It's no surprise then that 3rd Battalion, 5th Marines, uses dogs to help them find weapons, insurgents and explosive material. Many rescue organizations and law enforcement agencies use dogs to sniff out victims, criminals and items of potential hazard to the public. Research shows that dogs can even be used to sniff out cancerous moles on people and detect internal cancer through urine.

The next time Ol' Rex buries his nose in your crotch, say thanks. Maybe he's trying to save you.

For more information on the sense of smell in humans, visit the Howard Hughes Medical Institute at **www.hhmi.org/senses/d110.html.** For more information on the sense of smell in dogs visit the Discovery Channel Web site at **www.discovery.com.** M

"The dogs are trained to find the weapons no matter where they are."

Tanks Take 'Grunt' Out of Grunt Work

By Cpl. Shawn C. Rhodes
CAMP MAHMUDIYAH, Iraq

COMBAT ARMS

Bringin' big guns. With the help of a nearby 70-ton, M-1A1 Abrams tank, Lance Cpl. Timothy E. Foshay provides security for his vehicle during a patrol. The tanks are a welcome sight to Marines who appreciate the psychological and tactical impact the tanks have on enemy forces. Foshay is a rifleman with G Co., 2nd Bn., 2nd Marines.

Photo by Cpl. Shawn C. Rhodes

Patrols are dangerous in Mahmudiyah, but thanks to a whole lot of rolling steel, they're a little safer for the Marines of 2nd Battalion, 2nd Marine Regiment.

A detachment from B Company, 1st Tank Bn., recently joined the regiment and brought their 70-ton M-1A1 Abram tanks with them.

These tanks and their crews ease the dangers of patrolling in the area.

"If we can save a Marine's life by leveling a building so he doesn't have to go into it, we've done our job," said 1st Lt. Matthew A. Stiger, a 25-year-old tank platoon commander from Colorado Springs, Colo.

Part of the success of using tanks comes from the lasting effects of Saddam Hussein's regime, Stiger said. The regime would often park a tank in the middle of a town as a symbol of Saddam's power. Tanks have a similar effect on Iraqi insurgents today.

"It's kind of a letdown when we get called to a firefight," Stiger said. "When (terrorists) see our tanks, they usually scatter."

Infantrymen are glad to have the tanks aboard. Their 120-millimeter smoothbore cannons, capable of striking the enemy at 4,000 meters, makes the tank a "howitzer with treads."

"Instead of waiting to go through all the channels to call for a fire mission, we've got the tanks right there with us," said Lance Cpl. Jaime A. Hurtado, a 21-year-old G Co. rifleman from Queens, N.Y. "The bad guys know they're about to get (messed) up when they see the tanks rolling in."

The infantry is focused on keeping the major supply route near their camp open. This allows supplies to make their way into major cities like Baghdad and Fallujah. The tanks are key tools to the success of that mission because of their presence, their firepower and the punishment they can take.

"One day we were ambushed and insurgents shot thirteen rocket-propelled grenades at one tank," Stiger said. "No one inside the tank was injured. That's our company's record for the (most) fire a tank has taken."

The tanks' durability is due to its thick outer sheet of armor. This makes it a heavy and dangerous weapon, even for those inside it.

"Anything you do wrong with a tank could kill you," said Lance Cpl. Victor F. Lopez, a 21-year-old tank crewman from Seattle. "The gun has a 13-inch recoil on it, so if you're not in the right spot inside the tank when it fires it could take your head off. It's a big machine with a bunch of human parts operating it. We all have to be careful and act as a team at all times."

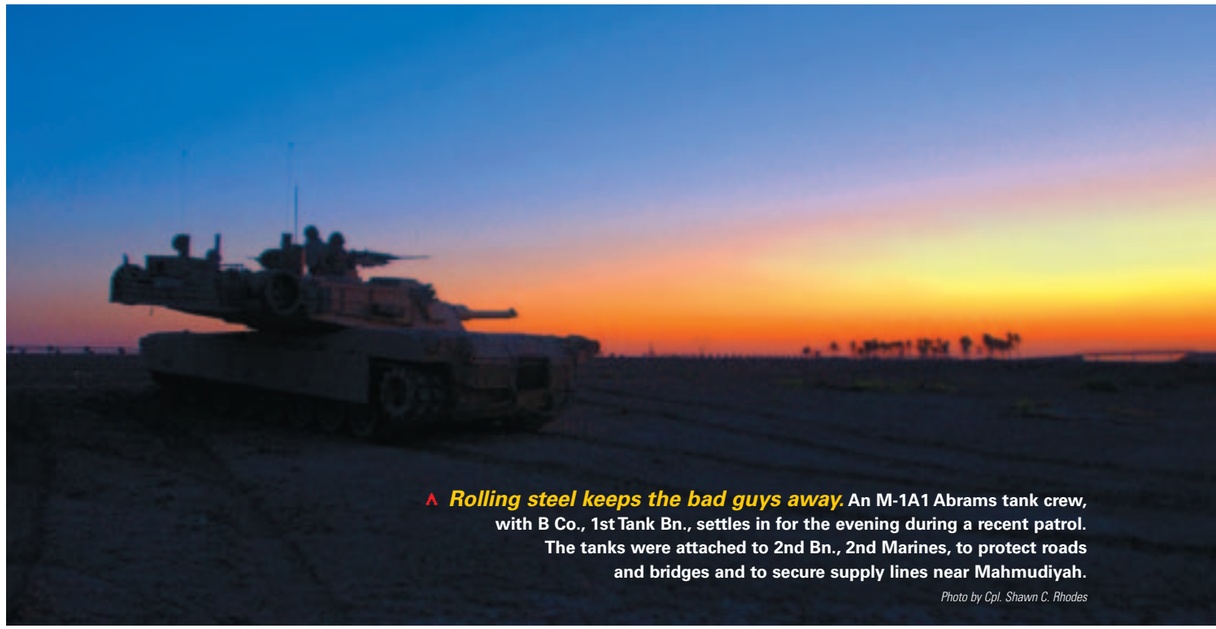
He respects the tank he helps control and he enjoys his job, Lopez said. Although temperatures can reach more than 110 degrees on a hot day, tank Marines wouldn't trade their jobs with those of the infantrymen they protect.

"We have a saying: 'We don't carry our weapon. Our weapon carries us,'" Lopez said. "One of the best parts of our job is that we don't have to walk to battle."

But, it's not an easy ride. Tank crewmen constantly practice so they can identify a target, load and fire a round as quickly as possible.

Responding quickly and accurately is what the infantrymen count on the tanks to do. Tank crewmen work hard to be an asset to the battalion.

"With our heavy machine guns and tanks, the enemy would have to be stupid to mess with us," Hurtado said. M



Rolling steel keeps the bad guys away. An M-1A1 Abrams tank crew, with B Co., 1st Tank Bn., settles in for the evening during a recent patrol. The tanks were attached to 2nd Bn., 2nd Marines, to protect roads and bridges and to secure supply lines near Mahmudiyah.

Photo by Cpl. Shawn C. Rhodes

M-1A1 Abram Tank

Length, Gun Forward: 385 inches
Width: 144 inches
Height: 114 inches without deep water fording kit
Weight fully armed: 67.7 tons

Armament:

Main Weapon: 120 mm M-256 main gun
Commander's Weapon: M-2 .50-caliber machine gun
Loader's Weapon: 7.62 mm M-240 machine gun
Coaxial Weapon: 7.62 mm M-240 machine gun

Cruising Range:

289 miles without NBC system,
279 miles with NBC system

Speed:

Maximum: 42 mph (governed)
Cross Country: 30 mph
Ground clearance: 19 inches

Obstacle Crossing:

Vertical: 42 inches
Trench: 9 feet wide
Slope: 60 degrees at 4.5 mph

Units:

Two active duty battalions and two reserve battalions

Crew:

A four-man crew composed of a driver, loader, gunner, and tank commander.

Warheads:

M-1A1 tank is capable of delivering both kinetic energy (sabot) and chemical energy (heat) rounds.

Unit Replacement Cost:

$4,300,000

Inventory:

403

Information pulled from Marine Corps Fact File at www.marines.mil/factfile.nsf/AVE?openview@count=3000.

"We don't carry our weapon. Our weapon carries us."

Golden Hour Critical in Saving Lives

COMBAT SUPPORT COMBAT SUPPORT

By Sgt. Robert E. Jones Sr.
FALLUJAH, Iraq

The Healing Touch.
Navy Lt. Robert J. Sobehart, the BAS medical officer, and three corpsmen apply bandages to a wounded Iraqi civilian's legs. The BAS is currently the only medical facility treating wounded right off the battlefield.
Photo by Sgt. Robert E. Jones Sr.

Do unto others quickly. That's the golden rule for the sailors and soldiers providing medical care in Fallujah.

They know that the hour between when a Marine is critically injured and when he is treated is a precious one. It is during this "golden hour" that the wounded have the best chances of survival if treated by a trauma team.

"If we don't (quickly) get (the wounded) to these trauma centers, then the odds of them surviving drastically decreases," said Chief Petty Officer Frank Dominguez, the senior medical department representative for Battalion Aid Station, 3rd Battalion, 1st Marine Regiment. "In this battle our Marines, sailors and soldiers have been accomplishing this over and over again."

The wounded get front door service from the battlefield to the trauma center.

"We have a unique ambulance service," said Dominguez. "Each company is equipped with two corpsmen inside a high-back armored vehicle, these are the ambulances. They bring the injured from the front line right to our front doorstep."

On average the BAS treats about 45 patients a day, including urgent to semi-urgent patients. They do this with a staff of one medical officer, one senior medical department representative, one independent duty corpsman, six corpsmen and seven Army medics.

Although their primary mission is caring for Marines, sailors and soldiers, they also take care of Iraqi nationals, if they have life, limb or eyesight emergencies, said Dominguez. Cases more routine in nature are directed to Iraqi medical facilities.

The staff knows that enemy wounded must also be treated.

"Basically, you just have to think of every patient as a person," said Navy Lt. Robert J. Sobehart, the medical officer. "It is difficult when individuals come in from just attempting to kill your brothers – with the smell of gun powder all over their hands – but our job is to treat everyone the same. That's what we do here."

Although the BAS is equipped to treat all cases that may arise, the more seriously injured are redirected to other capable facilities after initial treatment at the BAS.

"When we receive them, we treat them and fly them to either Camp Fallujah, Camp Taccqatum or Germany for (further) treatment," said Chief Petty Officer Richard R. Tomlinson, an independent duty corpsman with 3/1.

The BAS has no plans to leave Fallujah as long as they are needed.

"We will be open as long as we have Marines in Fallujah doing security or combat breaching operations," said Tomlinson. "We can easily pack up at any time and be closer or farther away from the fight within 15 minutes."

This ability to go where they are most needed is working. Warfare in urban areas can result in casualty rates of 80 percent, said Tomlinson. But that's not the case here and the BAS is doing its part to increase survival rates.

"We're within the golden hour almost every time, even though we're approximately an hour and a half away from any level-two medical facility," said Tomlinson.

Marines apply immediate aid in the thick of battle, corpsmen stabilize their condition for transport to the BAS, then the BAS staff gets to work – all within that golden hour. "Almost everyone treated here; we get them out and they're still alive, and it's all based on this system."

The golden hour rule has become the deciding factor between a life saved and a life lost, said Dominguez. "The golden rule is working well for us." M

"The golden rule is working well for us."

Squadron's 'Dynamic Duo' Reduces Threat in Iraqi Theater

By Cpl. Paul Leicht
AL ASAD, Iraq

Marines on the ground in Iraq can rest a little easier when conducting missions thanks to a squadron of guardian angels who watch over them from above.

The pilots of Marine Light Attack Helicopter Squadron 169 provide close-air support for ground and airborne escorts and convoys operating in the Iraqi theater. And their wards consider the squadron's presence priceless, said Lt. Col. Thomas M. Doman, executive officer, Marine Wing Support Group 37.

"We like having them around," Doman said. "A convoy incurs a lot of added risks when traveling without a gunship, and it is nice to know they are overhead."

Working in mixed sections, the Vipers of HMLA-169 fly two gunships, the AH-1W Super Cobra and the UH-1N Huey. The squadron is part of Marine Aircraft Group 16, 3rd Marine Aircraft Wing.

"In addition to close-air support, we fly ground escort missions for convoys all over Iraq," said Capt. John J. Bancroft, UH-1N pilot. "We primarily look out for ambushes and (improvised explosive devices), and provide navigational assistance for the forces on the ground."

Visual reconnaissance is "an implied task," the 31-year-old Oxford, N.Y., native and Naval Academy graduate said. "At night we use (forward-looking infrared sensors) to help detect targets, disturbed ground, rocket tubes, rocks along roadsides; pretty much anything that might be a danger to the convoys. If we see it, we contact the forces on the ground and move in to neutralize the threat."

Each of the gunships has its own unique qualities that make it invaluable to the mission.

< *Gunship Guardians.* **A UH-1N Huey gunship with the Vipers of HMLA-169 flies over Iraq during an escort mission July 27. The Huey is well-suited for ground escorts thanks to its crew-served weapons which have an almost 180-degree field of fire and ability to land and pick up casualties if necessary.**
Photo by Sgt. Nathan K. Laforte

The Huey is ideal for escort missions. Its crew-served weapons have an almost 180-degree field of fire on both sides and the aircraft includes an aft quadrant defense capability, said Bancroft.

What makes it different than the Super Cobra is its ability to act as a medical evacuation transport, said Bancroft. "The Huey can put down quickly and pick up casualties on the ground if necessary after an attack."

The Huey and the Super Cobra provide "mutual supportability" as a section for escorting ground convoys, but the Super Cobra also has another important responsibility in the air.

"Foremost, the Cobra's job in the airborne escort role is to protect medevac helicopters from ground threats, because the Cobra can keep up with them more easily than the slower Huey," said Capt. William Fenwick, AH-1W pilot.

"The Super Cobra's armament is also a big deterrent against small arms fire from the ground," said the 30-year-old native of Camp Hill, Pa. "If insurgents want to take a shot at the medevacs with us alongside, they are playing with fire." M

Striking it Rich in Desert

ROWPUs Bring in 'Liquid Gold'

By Capt. Eric Dent
FORWARD OPERATING BASE RIPLEY, Afghanistan

^ *Down the drain.* **Cpl. David Harris pumps purified water into a trailer here. The MEU's command element; 1st Bn., 6th Marines; HMM-266 (Rein.) and the MSSG-22 make up the majority of Task Force Linebacker as they conduct combat and civil-military operations in central Afghanistan.**
Photo by Capt. Eric Dent

In a land where water is as valuable as gold, the Marines of MEU Service Support Group 22 are tycoons.

Six Marines and two reverse osmosis water purification units keep up with the daily water demands of more than 2,000 other Marines of the 22nd Marine Expeditionary Unit (Special Operations Capable) operating in the heat of central Afghanistan.

The Marines produce, store and distribute water and run the field showers for the MEU, said Staff Sgt. Michael Talavera, the hygiene equipment chief from Framingham, Mass.

The ROWPUs are a versatile way for Marines to remove contaminants from saltwater or freshwater. Water is pumped out of a tiny river near Tarin Kowt and trucked to FOB Ripley. There it is pumped into a bladder and eventually through the filters of a ROWPU. After filtration, the water is treated with chlorine to ensure it is safe for consumption. The chlorine helps combat waterborne diseases.

Each ROWPU unit measures 8 feet by 10 feet and can fit on the back of a standard seven-ton truck. The MSSG keeps their ROWPUs on the ground to free the trucks for other purposes.

Cpl. Daniel Hillenbrand of Allentown, Pa., who considers himself an "aquatic engineer," spends the majority of his time monitoring gauges, changing filters and testing water purity.

The Marine Corps uses the 600-GPH version of the ROWPU. And although there are other higher production models available, the Marine Corps has a winner in the 600-GPH version, said Staff Sgt. Vincent Morgan, the MSSG-22 utilities chief and a hygiene equipment operator.

This model can easily make 1,200 gallons of water per hour with a freshwater source. But, saltwater requires more effort and production drops off to about 600 gallons per hour.

"I've been doing this for 12 years and I've never had a problem with this piece of gear," Morgan said. "You can run these continuously without any problems."

The Marines test the water quality each day when they begin production. They want to ensure that the water is ready for use.

"It makes a cleaner water than the bottled water," said Talavera. The quality is measured in total dissolved solids parts per million. Bottled water purchased in stores has a TDS level of between 115 and 140. The water coming from the ROWPU has levels ranging from 1 to 99 TDS parts per million.

In a harsh environment like Afghanistan, the need for hydration becomes more critical than ever. The Marines of MSSG-22 know how vital their role is to the unit's mission and take pride in doing their part.

"I like my job because I provide something that's needed and also something that boosts morale...like showers," said Lance Cpl. Joe Shelton, a hygiene equipment operator and who has been with MSSG-22 for a year.

For more information on the 22nd MEU (SOC) visit their web site at **www.22meu.usmc.mil.** M

"It makes a cleaner water than the bottled water,"